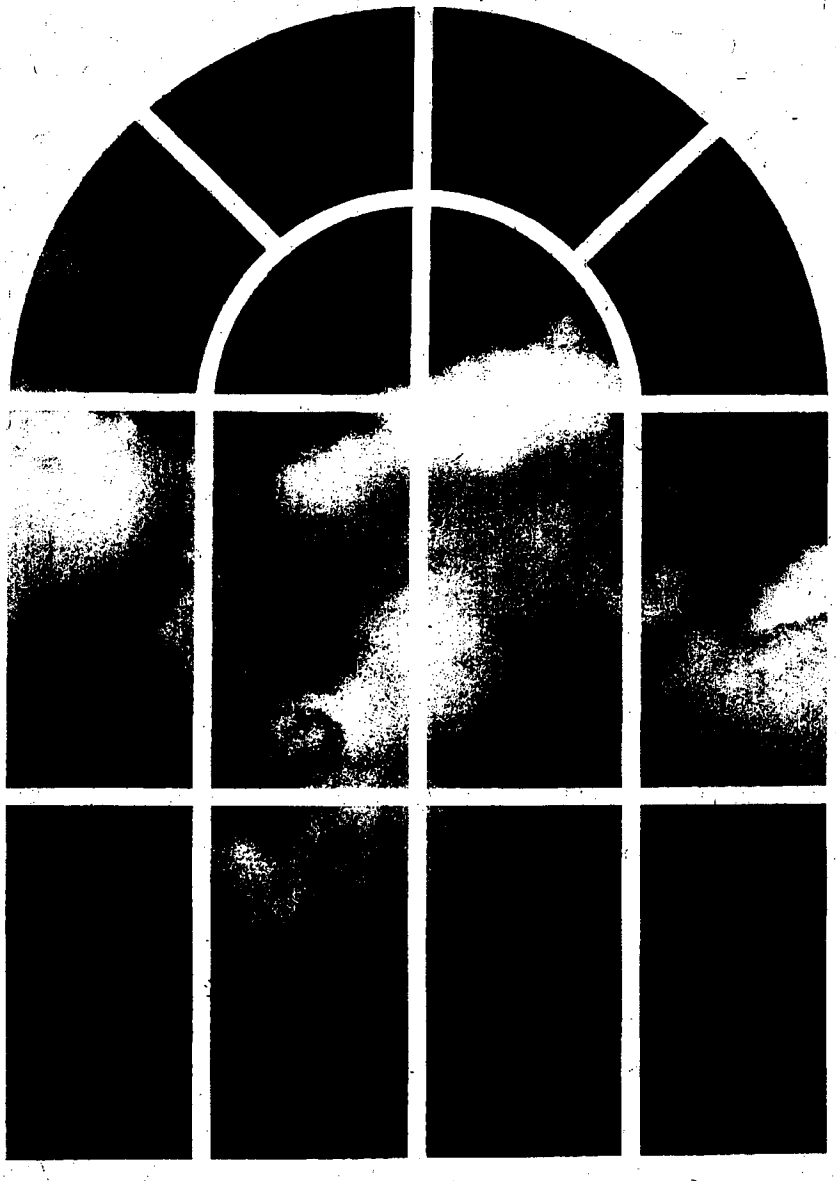
FINAL

APPENDIX IV-C
Transportation Control and Indirect Source Measure Recommendations from the SCAG Regional Council



September 1994

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

TRANSPORTATION CONTROL MEASURE

TCM 1. Transportation Improvements

TCM-1. TRANSPORTATION IMPROVEMENTS

SUMMARY

This measure includes the capital and non-capital facilities, projects, and programs contained in the Regional Mobility Element and programmed through the RTIP process to reduce emissions.

DESCRIPTION

This measure replaces Measures 1.a. Alternate Work Schedules, 1.b. Telecommuting/Non-motorized Transportation, 2.a. Employer Rideshare and Transit Incentives, 2.b. Parking Management, 2.c. Vanpool Purchase Incentives, 2.d. Merchant Transportation Incentives, 2.e. Auto Use Restrictions, 2.f. HOV Lanes, 2.g. Transit Improvements, 4. Traffic Flow Improvements, 5. Nonrecurrent Congestion, and 11. Rail Consolidation to Reduce Grade Crossings. Measure 13. Mixed Flow Improvements is included in the baseline assumptions and is not considered to be a TCM action.

Components contained in the RME and included in this measure are:

Capital-based actions

- HOV projects, and their pricing alternatives
- Transit improvements (bus, rail and shuttle)
- Park and Ride lots/intermodal facilities
- Bicycle and pedestrian facilities
- Urban Freeway System Management improvements
- Smart Corridors TSM programs
- Railroad consolidation programs such as the Alameda Corridor

Non-capital based actions

- Rideshare matching and information services
- Congestion Management Plan-based demand management strategies
- Statewide rideshare programs
- County/corridor-wide vanpool programs
- Telecommunication facilities/satellite work centers
- Transit pass centers
- Seed money for transportation management associations
- TDM demonstration programs/projects eligible for programming in the RTIP

Consistency of the emission reductions associated with these RME/RTIP mobility based strategies with the appropriate mobile source emission budget contained in the applicable SIP would serve as the basis for determining reasonable further progress and expeditious implementation of this TCM. This measure is intended to indicate the relative level of implementation that is anticipated to occur that is incorporated into the SIP planning assumptions. Not included in this measure are transportation projects and programs which are exclusively funded through local funds.

Under discussion is whether only the RME's and RTIP's federally funded projects and programs would be the basis for an enforceable commitment for this TCM. During conformity analysis, all

projects and programs which receive federal, state and which may potentially be partially or entirely locally funded must be considered in the determination of conformity and consistency with the emission budget contained in the applicable State Implementation Plan (SIP). These components of the Transportation Improvements TCM would contribute to emission reductions consistent with the emissions budget in the applicable SIP. Moreover, in determining conformity, insufficient funding may not be used as a reason for delaying implementation of TCMs.

Measures of progress in implementing these strategies could be one or more of the following (currently under discussion): (1) assessment of implementation of the first year's schedule of projects and programs which receive federal funding (thus excluding projects and programs which use State or local funds) and have obtained all necessary environmental permits and clearances; (2) assessment of implementation of the commitments made to fund the first three years schedule of projects and programs of the seven year RTIP; or (3) the level of emission reductions which would be achieved through implementation of these types of measures in the RTIP/RME .

In the first approach, maximum flexibility is intended to be demonstrated through implementation of the first year's funded commitment of the RTIP. Projects and programs beyond this year are not considered to demonstrate the level of commitment deemed necessary to satisfy EPA TCM enforceability and accountability requirements. This approach would require that all projects in the annual element be implemented in that year and be funded for implementation before other projects could proceed forward. Annual SIP amendments to move forward the "first year" of the RTIP projects would likely be required.

The second approach is intended to provide flexibility by reflecting the commitment to fund the schedule of projects and programs - and the associated emission reductions - which are included in the Triennial Element of the seven-year RTIP. The RTIP is prepared every two years with the opportunity to amend the document approximately once a year.

In the third approach, the SIP planning assumptions would be used to determine the level of implementation necessary through those programs and projects funded through the RTIP process. Flexibility is ensured by permitting an appropriate mix of strategies to be developed which are consistent with the emission budget contained in the applicable SIP. Thus, so long as the set of projects and programs are consistent with the emissions budget contained in the applicable SIP, a positive conformity finding would not be hindered. Although this approach would have to be based on clearly defined set of assumptions, the projects and their implementation schedules would not serve as the criteria for determining implementation progress.

BACKGROUND

The 1989 AQMP's Appendix IV-G and 1991 AQMP's Appendix IV-E for the South Coast Air Basin contained Measures 1.a. Telecommuting, 1.b. Non-motorized Transportation, 2.a. Employer Rideshare Incentives, 2.b. Parking Management, 2.c. Merchant Transportation Incentives, 2.d. Special Event Centers, 2.f. HOV Lanes, 2.g. Transit Improvements, 4. Traffic Flow Improvements, 5. Nonrecurrent Congestion, 11. Rail Consolidation, and Measure 13. Mixed Flow Improvements. These measures described vehicle trip, vehicle miles traveled, and congestion relief which could be anticipated to result from implementation of these strategies.

The federal Clean Air Act notes HOV lanes, traffic flow improvements, Park and Ride/fringe parking, and area-wide rideshare programs as specific TCMs which are considered to be reasonably available.

EMISSION REDUCTIONS

Preliminary emission reduction estimates are provided based on the difference between for the year 2000 an RTIP No Build scenario and a 2000 RTIP build scenario and for the year 2010 the difference between the 1993-99 RTIP plus planned mixed flow improvements and the draft RME 2010 Current Local Plan scenario. This estimates the maximum degree of emissions which could be expected from a Transportation Improvements TCM. To the extent that only those projects which require a federal action or are not federally funded, emissions reductions would need to be decreased to reflect only this portion of the RTIP/Regional Mobility Element.

	2000 Reductions (tons/day)	2010 Reductions (tons/day)
VT	4,829	390,456
VMT	1,260,996	16,672,768
ROG	3.88	4.54
NOx	(2.6) increase	7.57
CO	38.53	83.88

Source: Regional transportation model runs, draft Regional Mobility Element, December 1993 and EMFAC 7F.

ENFORCEABLE COMMITMENT

The first two years of constrained projects in the RTIP will be used as the initial enforceable commitment. As the biennial element of the RTIP is revised, the list of constrained projects will be updated. The list of constrained projects will "roll forward" and the enforceable commitment will automatically be revised to encompass the first 2 years of the constrained projects contained in each new RTIP.

IMPLEMENTING AGENCIES

AGENCY	ROLE
SCAG	Preparation of the Regional Mobility Element Preparation of the RTIP Determination of consistency between the projects and programs programmed in the RTIP and the RTP Determination of conformity
CALTRANS	Programming of projects and programs under Caltrans' jurisdiction
CTCs	Programming of projects and programs under CTC's jurisdiction
Subregional Organizations	Assist in monitoring implementation of strategies

Transit Operators	Operating identified transit infrastructure consistent with operational levels provided for in the RTIP
Local Governments	Identification of projects and programs through the RTIP process and their appropriate levels of implementation

COST-EFFECTIVENESS

To be determined.

IMPLEMENTATION ASSUMPTIONS

- The RME provides the long-term framework for the transportation improvements planned in the region. The RME, by law, is required to be to be updated or reaffirmed every two years. The projects and assumptions used in the RME would be the same assumptions used as the basis for the RTIP-based mobile source contributions to emission reductions.

- The seven-year RTIP is required, by law, to be consistent with the RME. To the extent that the RTIP deviates significantly from the RME and either the emission budget or the implementation of the first two year's schedule deviated significantly from the RME, the RME and/or the RTIP might have to be amended to reflect the projects and/or assumptions in the proposed plans/programs.

- The first two years of constrained projects in the RTIP would be considered as the enforceable commitment for this TCM.

MONITORING

The following table describes the Transportation Facilities TCM indicators and monitoring tools.

TCM COMPONENT	INDICATOR	MONITORING TOOL
HOV Lanes	Miles of HOV lanes Plan	RTIP/Conformity STIP Highway System Management Congestion Management Plan
Transit Improvements	Capital Investment Route miles by mode and total miles, by mode Bus - Municipal buses - Dial-a-Ride - Circulators Light Rail Heavy Rail - Metrolink - Red Line, etc.	Capital - STIP/RTIP STIP/RME/RTIP/Conformity Operational - Short Range Transit Plan Section 15 reporting requirements Public transportation portion of Management System

TCM COMPONENT	INDICATOR	MONITORING TOOL
Park and Ride Facilities	Number of parking spaces per Park and Ride facility Parking site square footage. Number of parking structure levels	RTIP/Conformity
Traffic Signal Improvements	Synchronized signal miles Number of new signalized intersections Number of new channelized intersections Number of eliminated unnecessary signals and stop signs	RME/RTIP/Conformity STIP
Urban Freeway Systems Management Improvements and Smart Corridors	Advanced Transportation Management Systems (ATMS) lane miles - Traffic management center - Office/Field Communication - Freeway surveillance - Closed circuit TV - Changeable message signs - Highway advisory telephone - Highway advisory radio - Ramp and connector metering and HOV by-pass lanes - Intelligent Vehicle Highway systems (programmed through the RTIP)	RME/RTIP/Conformity STIP
Operational Improvements	Traffic flow improvements (No through capacity enhancements) Intersection enhancements (no through capacity)	RME/RTIP/Conformity Highway System Management Plan Congestion Management System
Rideshare Programs	Regional/Corridor level Average Vehicle Occupancy Funding implementation/continuation of rideshare programs	RME/RTIP/Conformity STIP Origin and Destination Surveys
Programs	Funding implementation of programs/demonstration projects	RME/RTIP/Conformity STIP

TCM COMPONENT	INDICATOR	MONITORING TOOL
Bicycle Facility Improvements	- Miles of bicycle lanes - Number of bicycle sensitive loop detectors - Number of bicycle lockers - Bicycle safety and education programs - Bicycle promotions	RME

REFERENCES

1 Southern California Association of Governments. Draft Regional Mobility December, 1993.

2 SCAG, 1989 Regional Mobility Plan. March 1989.

3 SCAQMD, AQMP Appendix IV-G for the South Coast Air Basin. 1989.

4 SCAQMD, AQMP Appendix IV-E for the South Coast Air Basin. 1991.

5 U.S. Environmental Protection Agency. Final Notice of Rulemaking on (Guidelines. November 24, 1993.

CHAPTER III

MONITORING FRAMEWORK FOR TCMs

Key Points of the Chapter:

- Monitoring Program Requirements
- Administrative Processes
- Conformity Process and Criteria

A. INTRODUCTION

The monitoring program for the 1994 AQMP is a vital element in the attainment strategy for the South Coast Air Basin (SCAB). It is through the monitoring program that the basin's progress in achieving federal and state clean air standards is determined. Both the California Clean Air Act and the Federal Clean Air Act require that the basin achieve annual emissions reductions. The state act requires a five percent (5%) reduction per year, while the federal act calls for a four percent (4%) reduction annually. The task of the monitoring program is to determine if sufficient progress is occurring to meet those requirements.

The Federal Clean Air Act requires non-attainment areas to submit annual reports demonstrating "reasonable further progress" (RFP) toward attainment of the National Ambient Air Quality Standards (NAAQS). Likewise, the California Air Resources Board (ARB) requires that the basin submit annual reports to it which demonstrate RFP. Under the Federal Clean Air Act, the penalties which may be levied against an area that fails to demonstrate reasonable further progress are quite severe. For example, mandatory no-drive days can be required, federal approvals for transportation and water quality projects can be withheld, and

construction bans can be imposed. Lawsuits can also be brought against the basin which fails to make progress toward the attainment of standards.

The 1994 Transportation Control Measures/Indirect Source Rules (TCMs/ISRs) contain the follow requirements:

- A commitment schedule for each measure which defines a specific set of regional actions, sets target dates for these actions, and identifies regional agencies as the primary implementing agency for most control measures;
- Baseline data to be developed by the implementing agency prior to the implementation of the applicable control measure;
- The implementing agency to monitor the progress of the air quality programs under its jurisdiction and report the results to SCAG on an annual basis;
- Cumulative review by SCAG and SCAQMD by the end of the fourth year of the implementing agencies' performance to determine if additional actions are required; and,
- The inclusion of specific actions to be taken on a regional level by SCAQMD or ARB or EPA, if needed.

B. MONITORING PROGRAM

For the monitoring program, the following programs and/or processes have been outlined:

RTIP Guidelines and Computer Programs

The RTIP Guidelines will identify the data that needs to be collected, the method of data collection, the auditing process, outline the contents and format of the Monitoring Report, and be a reference guide for resources and information necessary to complete the report.

SCAG will also distribute computer diskettes with the Timely Implementation reporting format as a mechanism for the transmission of reporting data. Ultimately, two computer programs with electronic transmission capabilities will be developed: one for use by SCAG to tabulate the data, and one for use by regional agencies and local government to collect and report the data. The computer diskettes and programs will be subject to inter-governmental coordination with other agencies like the District.

Administrative Process

SCAG will administer the monitoring program for the transportation control measures through cooperative conformity reporting by the County Transportation Commissions for annual RTIP submissions and SCAG's on-going subregional plans. SCAG's RFP report will also be incorporated with SCAQMD's RFP report and submitted to EPA on an annual basis beginning

in 1996. Likewise, SCAG's portion of the progress report to ARB will be incorporated with SCAQMD's report and submitted to ARB on an annual basis. SCAG will coordinate this process with other regional reports and activities, such as conformity review, and the monitoring of the Growth Management and Mobility Plans, to avoid the duplication of time and resources by implementing agencies.

Each implementing agency including the State of California (Caltrans, DMV, etc.), regional (County Transportation Commissions, Congestion Management Agencies, etc.) and local governments in the SCAB will have a responsibility to collect and report the data necessary to monitor the AQMP's progress toward attaining the clean air standards. The relationship between successful implementation of the AQMP and the implementing agencies is clear. To make this a successful effort at the federal, state, and local levels, a substantial commitment to this monitoring program and its objectives is needed.

SCAG will administer the monitoring program for the transportation control measures. Local governments and regional agencies will be responsible for monitoring their actions and reporting the data to SCAG for incorporation into the annual report. Three indicators of the Timely Implementation of Transportation Control measures have been identified to track AQMP implementation:

- Commitment schedule of each control measure;
- RTIP plans, programs, and projects; and
- Control measures assumptions.

Ideally, the monitoring of each indicator will take place at the transportation corridor level, Regional Statistical Area (RSA) level, county level, and city level whenever appropriate, in addition to the analysis done at the regional level. Each of these indicators will be analyzed on an annual basis through the RTIP/RTP Timely Implementation Conformity Report, RFP Report and the ARB progress report.

C. CONFORMITY PROCESS

In November 1993, EPA released federal conformity rules for transportation plans, programs and projects. One of the most important aspects of the rule was the establishment of an emissions budget and the requirement that all transportation plans, programs and projects demonstrate that they will not cause emissions that will exceed the projected emission budget. The federal transportation conformity rule requires that TCMs must receive "maximum priority for approval or funding." Additionally, the metropolitan transportation planning processes specified in 49 CFR Part 613 Section 450.324, requires that the Transportation Improvement Plan (TIP) must give priority to eligible TCMs identified in the approved SIP. Given the funding implications associated with TCMs, it is imperative that the District's transportation attainment strategy clearly state what is considered as a TCM and any differences in modeling etc., between transportation and air quality planning that may affect conformity determinations.

AIR QUALITY AND TRANSPORTATION BASELINE FORECASTING

In order to understand the differences between transportation and air quality baseline forecasting, we first must understand the process of developing TCMs. Federal transportation as well as air quality regulations require the development and implementation of TCMs. TCMs are developed and funded through the following plans.

Regional Mobility Element (RME)

The RME is the principal transportation policy, strategy, and objective statement prepared by SCAG, which proposes a comprehensive strategy for achieving mobility and air quality mandates. It describes the region's strategy for adjusting its transportation behavior and investments as it balances the constraints of government-mandated financial and environmental objectives and mobility demands. The RME is designed as a 20 year plan that meets the mandated mobility and air quality requirements through 2015. In the SCAG region, the RME serves as the Regional Transportation Plan (RTP).

Transportation Improvement Plan (TIP)

The TIP is a seven-year multi-modal program of financially constrained regional transportation improvements for highways, transit, aviation related improvements, and Transportation Control Measures. Essentially, the TIP provides funding to implement, the first seven years of the RME.

State Implementation Plan (SIP)

The SIP is the long-range plan for attaining the National Ambient Air Quality Standards (NAAQA). The SIP is required to contain TCMs as well as an Indirect Source Control program.

The baseline forecast for regional transportation planning purposes contains all projects that have environmental clearance or are under construction, plus all mixed flow projects in the TIP between now and the year 2010. For air quality purposes, the baseline emissions forecast includes all rules and control strategies adopted as of January 1, 1994.

Transportation Control Strategies

The 1994 AQMP contains one transportation control measure, TCM - 1 Transportation Improvements. TCM 1 contains all projects in the TIP except for those in the baseline, assuming completion of projects that begin construction under the 1993-99 RTIP projected forward to 2010. The enforceable commitment for this measure will be the implementation of the Biennial Element of the Regional Transportation Improvement Plan. This measure is designed to be updated every 2 years as part of the Biennial Element update to the Regional Transportation Improvement Plan. Those transportation projects that are air quality beneficial and receive funding in the Biennial Element will become the indicators to determine if the TCM has be expeditiously implemented. This TCM is designed, therefore, to be a measure that is: continually implemented over the life of the AQMP, i.e. until 2010; one that reduce emissions based on implementation of financially constrained transportation projects; and one which is reevaluated every two years.

E. TIME SCHEDULE FOR THE MONITORING PROGRAM

The first three years of the Monitoring Program are divided into two phases - each phase with a different purpose.

Phase I: 1994 Timely Implementation Monitoring Program

During 1994, a Memorandum of Understanding and work program will be prepared with the South Coast Air Quality Management District to establish the monitoring program for the 1994 AQMP. The work program will consist of the following:

- Collect baseline data for 1990 from each of the implementing agencies for the applicable measures; and
- Develop the components of the monitoring program:
  1. Report Manual and Computer Programs
  2. Administrative Process

Phase II: 1995 and 1997 Timely Implementation Conformity Report

A biennial audit of progress in implementing the transportation control measures of the 1994 AQMP and an evaluation of the growth projections and transportation activity indicators will be performed. The report will include at a minimum the following elements:

- Monitoring required for the conformity procedures;
- Examine the implementation issues for each control measure through an in-depth evaluation of selected representative implementing agencies to determine if the issues are valid and if so, how implementing agencies are addressing them;
- Recommend corrective actions, if necessary;
- Include a cumulative report of Timely Implementation of Transportation Control Measures from the base year, and
- Identify a revised TCM target, growth trend projection, or transportation activity indicator if emission reduction shortfalls occur.

APPENDIX I

BACKGROUND

Key Points of the Chapter:

- Definition of Transportation Control Measures (TCMs)
- Role of TCMs in reducing mobile source emissions.
- Regional TCM implementation efforts to date.
- Regulatory requirements for TCMs.
- Roles of key agencies, institutions and special committees in TCM development and implementation.

A. ROLE OF TCMS IN AIR QUALITY ATTAINMENT

1. WHAT ARE TCMs?

Transportation Control Measures (TCMs) are transportation and land use-based strategies that are intended to reduce the amount of pollutants emitted into the air from motor vehicles by changing the way people make trips, alleviating traffic congestion and facilitating infrastructure changes to promote alternatives to single-occupant vehicles (SOV). TCMs may include traffic flow improvement strategies, changes in transportation pricing structures, changes in local land use patterns, institution of demand management strategies, restrictions on automobile use and efforts to reduce aviation, goods movement and locomotive emissions. The 1990 federal Clean Air Act Amendments (CAAA) and the federal Intermodal Surface Transportation Efficiency Act (ISTEA) emphasize the role of TCMs in state and local efforts to reduce emissions from transportation sources. These laws also allow considerable flexibility in the use of TCMs. The CAAA requires states to submit state implementation plans (SIPs) outlining their efforts to meet federal air quality standards. In addition, states with severe and extreme nonattainment areas are required to use TCMs to offset the growth in

emissions due to increases in vehicle miles traveled. The CAAA lists 16 TCM strategies that states and localities can include in their transportation plans. ISTEA reinforced the CAAA mandates by limiting the use of federal transportation funds in areas violating federal air quality standards.

2. MOBILE SOURCE CONTRIBUTION TO AIR QUALITY PROBLEM

While there are a number of emission sources that contribute to the problem of air pollution (e.g. mobile, stationary and indirect), the contribution of mobile sources is by far the most significant. In 1990, mobile sources contributed approximately 52 percent of the Volatile Organic Compounds (VOC) and 82 percent of the Oxides of Nitrogen (NOx). In the year 2010, it is projected that the mobile source contribution to VOC and NOx will be 28% and 90%, respectively.[1] These pollutants are important because they are the primary precursors to Ozone. On-road mobile sources, including the automobile, were also responsible for approximately 99% of the CO emissions in 1990. This percentage is expected to decrease to 96% by 2010. Problems in the SCAB will be magnified by expected increases in population growth. Increases in population translate into increases in vehicle miles traveled (VMT) and the number of vehicle trips (VT), all of which contribute to increased emissions from mobile sources.

3. RECENT HISTORY OF TCM DEVELOPMENT IN SCAB

TCMs for the 1994 AQMP

California law requires the 1994 AQMP to be submitted to ARB by December 31, 1994. The Federal CAAA requires the Ozone Plan to be submitted to EPA by November 15, 1994. Consequently, the District is tentatively scheduled to adopt the 1994 AQMP in July 1994 to meet these statutory deadlines. The Ozone Plan will be a part of the overall AQMP strategy to continue on the path to attainment of all ambient air quality standards. For the local government TCMs, regional achievement of the 1994 trip reduction target will also set the stage for achievement of future performance targets necessary to reach attainment by 2010 for Ozone. The mobile source emissions strategy for the 1994 AQMP is discussed above in Chapter I, Strategic Direction.

TCMs in the 1991 AQMP

The 1991 AQMP was designed to attain the transportation performance standards in the federal and state Clean Air Acts (discussed in greater detail below) through a comprehensive mobile source control strategy that reduces mobile source emissions to a level that achieves ambient air quality standards. There are three elements of the mobile source control strategy:

- More Stringent Tail-pipe Standards and Less-Polluting Fuels;
- Expanded Infrastructure and other TSM Improvements; and
- Reduced Vehicle Use.

1 Draft Summary of Projected Emissions Inventory for 1994 AQMP. February 1994.

As part of the third element, SCAG identified six TCMs for local government implementation that are related to reducing VT and VMT. These TCMS ranged from telecommuting, to ridesharing, to bicycle pathway systems. SCAG identified an implementation strategy for these measures that would provide local governments with the first opportunity to implement these programs. If local governments do not take enough action to achieve the emission reduction targets called for in the AQMP, then the District was required to "backstop" the action with a regional rule.

The District also developed six indirect source review (ISR) measures. State and federal law enable the District to adopt ISR programs which are aimed at sources that generate or attract vehicle trips. Included in the District's program were plans to reduce trips and VMT from schools, special activity centers, airports, regional shopping facilities, etc. The District intended to adopt regional rules to implement the various ISR programs, and to provide local governments with the first opportunity to take over these programs at the local level. These programs were chosen for regionwide implementation because it was believed that there needed to be some level of consistency between jurisdictions. However, the opportunity to tailor the program for local characteristics and needs was retained.

Consolidation of Local Government TCMs in the 1992 CO Plan

Subsequent to the District Governing Board's approval of the 1991 AQMP, the District was required by the federal CAAA to develop an attainment plan for CO. The 1992 CO Plan specifically addressed compliance with the federal CO standard, because the CAAA requires submittal of pollutant specific attainment plans. The District was able in most cases to fulfill the requirement by extracting those portions of the 1991 AQMP that reduced emissions from the targeted pollutant. However, in some cases, changes to the 1991 AQMP control measures were made for the 1992 CO Plan. The changes were specific to the local government TCMs discussed above. The seven 1991 AQMP local government TCMs (including the District ISR measure) were consolidated into one measure (FC-4) and a performance based program was developed at the request of local governments. As a result (FC-4) was created for the CO Plan that established a vehicle trip performance target for these seven control measures and a menu of actions that local governments could select from to achieve the target. This represents a departure from the traditional TCMs which prescribed a series of actions for local governments to take. The emission reductions assigned to local governments as a result of these TCMs remained the same.

TCMs as Contingency Measures

While the TCMs are considered contingency measures in the 1992 CO Plan, the TCMs are required to reach attainment of certain ambient air quality standards in the 1991 AQMP and, as such, are not contingency measures in that plan. The federal CAAA requires that contingency measures be submitted to EPA in regulatory form to take effect if the actual rates of growth in VMT exceed the projections. However, since these TCMs are control measures in the 1991 AQMP and necessary for the attainment demonstration for Ozone, they must be implemented regardless of their status in the 1992 CO Plan. As part of the environmental analysis performed for the 1991 AQMP, the District included an AQMP without TCMs as an alternative in the Environmental Impact Report (EIR). The analysis demonstrated that, without the TCMs, the Basin could not achieve several of the NAAQS.

The District has been using the updated TCM structure from the 1992 CO Plan to implement the 1991 AQMP. By implementing the 1991 AQMP in this manner, the actions to implement this plan may also suffice for complying with federal requirements to have the contingency measures in the 1992 CO Plan in regulatory form. In addition, local governments are provided more flexibility for

implementing the seven TCMs in the 1991 AQMP. This will allow local governments and the District to take one set of actions to comply with both state and federal law, while implementing the 1991 AQMP and making contingency measure FC-4 from the 1992 CO Plan enforceable.

B. REGULATORY REQUIREMENTS FOR TCMS

Both federal and state legislation provide a significant role for the development, funding, and implementation of TCMs in non-attainment areas such as the South Coast Air Basin (SCAB). Requirements at the state and federal level specify that all reasonably available TCMs be implemented as part of an air quality attainment strategy. State and federal requirements for TCMs are contained in the federal Clean Air Act Amendments, the Lewis-Presley Act for the SCAB, the California Clean Air Act and the Intermodal Surface Transportation Efficiency Act (ISTEA). These requirements are summarized in Table 1 and are described in greater detail in the sections below. Any strategies included as a TCM in an attainment plan must meet these criteria. In addition, it is crucial that mobility strategies contained in regional plans such as the Regional Comprehensive Plan (RCP) and Regional Transportation Plan (RTP) provide for the implementation of TCMs to ensure that air quality improvements continue, and that the flow of transportation funding to the region is maintained.

TABLE 1
TCM REQUIREMENTS

Federal	State
108(f) list of TCMs	Implement TCMs considered reasonably available
TCMs must be: Enforceable Quantifiable Replicable Accountable	AQMP to provide for TCMS
Contribute to an increase in large employer peak period "AVR"	Cost-effectiveness
Offset growth of emissions due to increases in VMT or Vehicle Trips	Monitoring procedures for compliance and effectiveness
Forecast VMT and Offset Exceedances	1.5 AVO by 1999
VMT	Substantially reduce the rate of increase in
	Publicly Acceptable

1. FEDERAL REQUIREMENTS

By November 15, 1994 nonattainment areas for Ozone must submit an Ozone plan as required by the federal CAAA. For severe and extreme areas, these plans must contain TCMs. The CAAA[2] provides for highway sanctions, which may be imposed by the EPA Administrator if the attainment strategy does not attempt to maximize the use of TCMs in conjunction with all other strategies. Although safety projects are categorically exempted, all other projects could be sanctioned.

Fundamental TCM Requirements

The General Preamble for the Implementation of Title I of the CAAA describes EPA's preliminary views on how to interpret various provisions of Title I concerning SIP revisions required for nonattainment areas. The General Preamble sets out fundamental requirements for TCMs included in SIP submittals. TCMs must be:

- Quantifiable: Emissions reductions must be tied to specific, quantifiable actions phased over the air quality planning horizon to facilitate monitoring.
- Enforceable: Implementing agencies must: 1) have the authority to implement the actions that achieve emissions reductions, 2) demonstrate the resources necessary to implement the actions in accordance with the emissions reduction schedule, and 3) be accountable for the implementation of each action.
- Accountable: Implementation of the action must be enforceable through the action taken by the implementor with appropriate backstop measures to ensure implementation and contingency measures to ensure emissions reductions, in place, at the time the air plan is adopted.
- Replicable: Emissions reductions claimed for each measure must be realistic, based on either research or replicable analytical procedures.

The General Preamble also states that for a measure to be enforceable it must clearly spell out which sources are subject to its requirements, what the requirements are, the time-frame within which the requirements must be met, and definitive recordkeeping and monitoring procedures. To obtain EPA approval of a SIP, control measures must be legally enforceable under state and federal law in such a way that they could be enforced under the federal CAAA by a third party (e.g. citizen)[3] and by EPA[4].

Transportation Performance Standards

The federal CAAA transportation performance standards are summarized in Table 1 and are described briefly below:

- Employer Trip Reduction Program that Achieves a 25 Percent Increase in Average Vehicle Ridership (AVR)

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2 42 USC 7509 (b).

3 42 USC 7604.

4 42 USC 7413.

Severe and extreme areas for ozone, which include the SCAB, must require large employers to achieve a 25 percent increase in AVR above the average vehicle occupancy (AVO) within four years from December 31, 1991.

- Offset Emissions due to Growth in Vehicle Miles Traveled (VMT) and Vehicle Trips (VT)

  Severe and extreme areas for ozone must adopt specific enforceable TCMs to offset any growth in emissions due to increased VMT or trips. The reduction in VMT and trips must also be great enough to achieve the periodic emission reductions required by the federal CAAA.

- Forecast VMT and Offset any Exceedances

  VMT must be forecast for each year up to the year of attainment for CO. Annual updates of the forecast and reports regarding the extent to which such forecasts were accurate must also be submitted by the District, through the ARB and then to EPA. In addition, contingency measures must be implemented if any estimate of VMT submitted in an annual report exceeds that predicted in the most recent forecast, or if the SCAB fails to meet the federal CO standard by the attainment date.

Reasonably Available Control Measures

The federal CAAA requires implementation of all reasonably available TCMs. As described above, the Act requires that within two years from the date of enactment, states submit an attainment plan revision that identifies and adopts specific, enforceable control measures to offset growth in emissions resulting from growth in VMT and VT, and to achieve the periodic emissions reductions. In order to demonstrate attainment with the NAAQS, nonattainment areas must consider and choose from among the measures identified in Section 108(f) of the Act. The Section 108(f) list of control measures is contained in Table 2 below.

TABLE 2
FEDERAL REASONABLY AVAILABLE TCMs
Section 108(f)

1. Programs for improved transit
2. HOV and bus lanes
3. Employer-based transportation management plans.
4. Trip reduction ordinances
5. Traffic flow improvements
6 Fringe and corridor park and ride facilities
7. Auto use restrictions
8. Provisions of HOV/shared ride service
9. Limitations to encourage use of facilities/areas by pedestrians and bicycles
10. Bicycle facilities
11. Programs to control extended vehicle idling
12. Programs to reduce extreme cold start emissions
13. Employer-sponsored flexible work schedules
14. Programs and ordinances to facilitate alternatives to SOV use in planning and development, including new shopping centers, special events and other centers
15. Construction of non-motorized and pedestrian facilities
16. Programs to encourage voluntary removal of pre-1980 vehicles

New Technologies

Section 182(e)(5) of the federal CAAA states that EPA may approve provisions of a SIP (and an attainment demonstration based on such provisions) for an extreme nonattainment area which anticipate development of new control techniques or improvement of existing control technologies, if the state demonstrates that:

1) such provisions are not necessary to achieve the incremental emission reductions required during the first 10 years after the date of enactment of the 1990 CAAA; and

2) the State has submitted enforceable commitments to develop and adopt contingency measures which will be implemented if the anticipated technologies do not achieve planned reductions.

Contingency measures must be submitted to EPA no later than three years before proposed implementation of the plan provisions. In addition, contingency measures must be adequate to produce emission reductions sufficient, in conjunction with other approved plan provisions, to achieve periodic emission reductions and attainment by the applicable dates. If EPA determines that an

extreme nonattainment area has failed to achieve an emission reduction requirement because of an inability to fully implement new control technologies, the EPA must require the state to implement the contingency measures to the extent necessary to assure compliance with the Act.

Conformity

Conformity is the process by which SCAG, the Metropolitan Planning Organization (MPO) in the six-county region, ensures that projects, programs and plans adopted, funded and implemented in the region, conform to the applicable implementation plan (SIP) including providing for the implementation of TCMs contained in the SIP. Section 176(3)(c)[5] specifies that no department, agency, or instrumentality of the federal government shall engage in, support in any way, provide financial assistance for, license or permit, or approve any activity that does not conform to an attainment plan after it has been approved.

The Final Conformity Regulation[6] establishes criteria and procedures for the timely implementation of TCMs. Transportation plans and TIPs cannot be found in conformity unless the "timely implementation" criterion is satisfied. RTPs, TIPs and projects not from a conforming RTP and TIP must provide for timely implementation of TCMs eligible for federal monies and which are in the SIP/FIP. RTPs must provide for timely completion and implementation of all TCMs consistent with SIP schedules for implementation and not interfere with implementation of any TCM. TIPs must demonstrate that all applicable TCMs are on schedule, or the MPO and DOT, through the consultation process, must determine that past problems have been corrected and all delayed TCMs have been given maximum priority for funding and approval and that there will be no interference with implementation of any TCM. For TCMs which are not on schedule or which are being replaced, conformity cannot be shown for RTPs and TIPs until a SIP revision has been approved by EPA substituting other TCMs which provide emission reductions adequate to meet all federal CAAA requirements, including demonstrating no weakening of the SIP.[7]

Promulgation of the Federal Implementation Plan (FIP)

In February, 1994, EPA issued the draft FIP to bring the SCAB into attainment for ozone and carbon monoxide in accordance with federal court order. Following extensive public review, EPA will undertake revisions to the FIP and will publish the final Plan in early 1995. State and local agencies are still required by the Clean Air Act to develop air pollution control plans due by November 15, 1994. As acceptable local and state rules are adopted, they can replace the proposed federal controls. The FIP action serves as a significant backdrop for the development of the 1994 AQMP and TCMs for the South Coast. The FIP also presents an opportunity to address sources that are under federal jurisdiction, including trains, planes, trucks, ships and some off-road vehicles.

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5 42 USC 7506(c).

6 40 CFR 51.

7 Federal CAAA, Section 110 (l).

Goals Of The Fip

According to EPA's Proposed Rulemaking on Federal Implementation Plans in California[8], the goals of the FIP are to:

- Achieve the emissions reductions needed to meet federal air quality standards as required by the courts and the federal Clean Air Act.
- Develop the FIPs in a manner that encourages and assists the implementation of air quality measures by state and local agencies.
- Minimize socio-economic impacts.
- Minimize federal intrusion into state and local affairs.
- Ensure that the federal government does its part to contribute to a solution.
- Ensure fairness with respect to impacts on the population as a whole and on individual air pollution sources.

The FIP includes proposals to regulate emissions from mobile sources as well as other source categories. The Plan includes an enhanced Inspection & Maintenance program and encourages the development of cleaner technologies.

Legal History of the FIP

On February 15, 1994, a notice of proposed rulemaking for the draft FIP was promulgated by EPA. The FIP was prepared under federal court order following several years of legal challenges by environmental groups. These groups charged that EPA should have disapproved state ozone and carbon monoxide plans because of their failure to demonstrate attainment by 1987, in accordance with the Clean Air Act Amendments of 1977. Following the ruling against EPA by the U.S. Court of Appeals for the Ninth Circuit in July 1991, the Solicitor General filed with the Supreme Court petitions for writ of certiorari. These petitions were denied on February 22, 1993.

The Clean Air Act Amendments of 1977 required all areas to submit ozone and carbon monoxide plans in 1979 and 1982, demonstrating attainment of the national health-based standards by 1987. Because of the massive emissions reductions needed for attainment in the SCAB, the State and local agencies acknowledged that their plans would not result in attainment by the Act's deadline. EPA took no action to disapprove the attainment demonstrations, since the plans' failure to meet the 1987 deadline was not the result of a failure to pursue aggressive controls.

8 40 CFR 52.
40 CFR 81.

Environmental groups successfully challenged EPA's failure to disapprove the 1982 State plan for the South Coast and then sought a court order requiring EPA to promulgate a replacement federal plan. In compliance with subsequent settlement agreements in the South Coast, EPA proposed a CO and ozone FIP. However, following amendments to the Clean Air Act in November 1990, EPA argued that the Agency no longer had an obligation to issue the FIP, since Congress had established comprehensive new State planning requirements and attainment deadlines.

In February 1991, the U.S. District Court for the Central District of California agreed with EPA and effectively vacated the order for the South Coast FIP. However, in December 1991, the District Court for the Eastern District (with jurisdiction over the Sacramento FIP) concluded that the FIP obligation remained. Both cases were appealed and, in July 1991, the U.S. Court of Appeals for the Ninth Circuit ruled against EPA. Following the 1993 Supreme Court denial of the petitions for writ of certiorari, the cases were remanded to the Central and Eastern District Courts for further action on the schedules.

Sanctions and Implications

In accordance with the federal CAAA, EPA may impose sanctions statewide or for a particular nonattainment area, if: (1) EPA finds that the state has failed to submit a required plan, (2) EPA disapproves a plan for failure to meet one of the required elements of a plan, or (3) EPA finds that a plan is incomplete, does not meet the criteria established in Section 110(k)(1)(A) of the CAAA[9], or is not being implemented. Among the provisions of Section 110, Implementation Plans are required to include: enforceable control measures and schedules for compliance; monitoring; enforcement measures; and assurances that the jurisdiction has adequate personnel, funding, and authority to carry out the plan.

On March 8, 1994 the U.S. Court of Appeals, D.C. Circuit 91-1596[10] rendered an opinion that conditional approval of attainment plans and their control strategies was not acceptable. EPA must clearly either approve or disapprove control strategies proposed in an attainment plan.

If a deficiency is not corrected within 18 months of the EPA finding, sanctions will be initiated. Sanctions available to the EPA Administrator include highway sanctions and 2:1 stationary source offsets.

Highway Sanctions

The imposition of highway sanctions would prohibit approvals of non-exempt highway projects. Only projects specifically identified as safety improvements would be categorically exempt. The exemption for safety projects is narrowly drawn so that projects that would expand capacity or improve flow would not be eligible for federal approval, regardless of whether they have a coincident safety benefit. Examples of exempt projects include rail-highway grade crossing improvements, safety traffic signalization, HOV lanes, and planning for trip reduction ordinances.

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9 42 USC 7410.

10 Natural Resource Defense Council, Inc. vs. Environmental Protection Agency et. al., March 8, 1994, U.S. Court of Appeals, D.C. Circuit 92-1596.

Offsets

Offsets apply to stationary sources and require new or modified major sources that increase emissions to obtain a reduction in emissions in the nonattainment area at a ratio of emission reductions to increased emissions of at least 2:1.

STATE REQUIREMENTS

The California Clean Air Act (CAA) responds to the federal CAAA, in some cases sets stricter standards, and identifies several transportation performance standards.

Transportation Performance Standards

The CCAA contains the following transportation performance standards for areas with severe air pollution:

- 1.5 Average Persons Per Vehicle During Commute Hours by 1999

The CCAA requires each district with severe air pollution, including the SCAB, to achieve an average of 1.5 or more persons per passenger vehicle during weekday commute hours by 1999.[11] By including bus and rail transit and assuming full implementation of the District Rule 1501 (regional ridesharing rule), the vehicle occupancy rate is anticipated to be 1.3. In order to achieve the 1.5 standard, vehicle occupancy and transit use must increase by at least 50 percent or higher levels of telecommuting, work-at-home or non motorized travel must occur.

- No Net Increase in Mobile Source Emissions after 1997

Each district with severe air pollution is required to demonstrate no net increase in vehicle emissions after 1997.[12] ARB's current low and zero emission vehicles and clean fuels program is expected to result in a cleaner vehicle fleet that alone could comply with this standard. However, it is anticipated that the current growth trend in VMT and trips could require the implementation of TCMs.

- "Substantially" Reduce the Rate of Growth in VMT and VT

Areas with severe pollution are required to provide reasonably available TCMs sufficient to substantially reduce the rate of increase in passenger vehicle trips and miles traveled per trip.[13] According to ARB's Transportation Performance Standards Guidelines, at a minimum, the rate of change in VMT and VT are to be decreased to the rate of population growth.[14]

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11 California Health and Safety Code Section 40920(c).

12 California Health and Safety Code Section 40920(c).

13 Health and Safety Code Section 40919(d).

14 California Health & Safety Code, Section 40918 (c).

Reasonably Available TCMs

The requirement to include all Reasonably Available TCMs in the Health and Safety Code is spelled out in the ARB Guidance Document[15] and is analogous to the Section 108(f) requirement in the federal CAAA.

C. ROLES OF KEY AGENCIES IN TCM DEVELOPMENT

The implementation of transportation control measures (TCMs) involves federal, state, regional and local agencies.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG)

SCAG is responsible for the development of TCMs to be included in the AQMP for the SCAB.[16] SCAG is governed by the 70-member Regional Council. SCAG develops TCMs in cooperation with local governments and provides these TCMs to the SCAQMD for inclusion in the AQMP. SCAG is also responsible for preparing and approving portions of the Air Quality Management Plan for the SCAB relating to regional land use, housing and employment. SCAG is responsible for determining the emission reductions that can result from TCMs and is formulating the mobile source emission budget for the TCMs proposed for the 1994 AQMP.

As the federally mandated MPO, SCAG is responsible for the preparation and adoption of a Regional Transportation Plan (Regional Mobility Element); preparation and adoption of the Regional Transportation Improvement Program (RTIP); making findings of conformity with the respective State Implementation Plans (SIP) for improving air quality; assessing whether timely implementation of TCMs included in the applicable SIP is occurring; and, monitoring transportation performance indicators to help ascertain progress towards meeting the regional performance targets.

Several SCAG Task Forces made up principally of local government officials have assisted in providing policy level input into the TCM development process. These committees include the following: Advanced Transportation Technology Task Force; Market Incentives Task Force; Aviation Technical Advisory Committee; Regional Railroad Air Quality Emission Reduction Program; and the joint SCAG/SCAQMD TCM Policy Committee.

SCAG also assists in coordinating subregional implementation strategies to reduce vehicle travel. In concert with the task forces described above, the performance-based approach to TCMs called for by subregions in the 1992 Carbon Monoxide Plan (CO Plan) has been used to assess how TCMs could be refined for the 1994 AQMP. This process was intended to continue the evolution from strict "command and control" implementation of TCMs to a more performance-oriented approach to TCM development and implementation. Control measure FC-4, "Additional Vehicle Miles Traveled/Vehicle Trip (VMT/VT) Reduction Strategies" in the 1992 CO Plan offered an interim stepping stone in the development of a performance-based approach.

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15 California Air Resources Board. Office of Air Quality and Transportation Planning. Transportation Performance Standards of the California Clean Air Act: Guidance Revision, 1993.

16 California Health & Safety Code, Section 40460(b).

SUBREGIONAL ASSOCIATIONS

Subregional Association of Government in the SCAG region have a long history of involvement in the transportation/air quality planning. They help coordinate air quality planning and generally do not have implementation responsibilities.

Subregional groupings of cities and counties are becoming increasingly involved in air quality planning as the region shifts from a top down to a bottom up air quality planning emphasis. To a large extent, this increased involvement results from the creation by SCAG of a 70-member Regional Council, with 13 subregional planning associations that have signed Memoranda of Agreement wit SCAG. The subregional associations have received funding available for implementing TCMs through ISTEA, as well as other funding available for local government air quality and transportation planning from the state vehicle registration fee, other state funds, and countywide sales taxes designated for transportation.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)

The SCAQMD is responsible for air pollution control within the SCAB. The District approves and implements the AQMP and all SIP revisions. The District develops rules and regulations for reducing emissions from stationary sources and has the authority to regulate indirect sources.

The SCAQMD is directed by a twelve-member Governing Board, consisting of locally elected officials and public members. Functions of the SCAQMD are defined by the Lewis-Presley Act[17] which was initially adopted in 1976. The Act specifies requirements for preparing and updating plans to meet state and federal air quality standards. Because of the severity of the air pollution problem in the SCAB, the Legislature specifically called for the SCAQMD to take a leadership role in air pollution control and development of new technologies and strategies. The legislation also requires the SCAQMD to submit an annual report to the ARB and the Legislature demonstrating Reasonable Further Progress toward attainment of the NAAQS.

The SCAQMD's recent planning efforts have focused on the following control areas:

- Promoting use of clean fuels
- Rapid introduction of clean vehicles
- Conserving natural gas and electricity
- Reducing emissions from all sources
- Reducing vehicle miles traveled and trips taken
- Complementing the existing regulatory system with market incentive-based strategies for stationary sources (RECLAIM Program)
- Increased control of toxic air contaminants
- Increased concern for global warming and ozone depletion
- Mitigating particulate matter (PM10) pollution in the Coachella Valley

17 California Health and Safety Code Section 40400 et. seq.

Under the California Health and Safety Code,[18] the District may delegate to local governments any function with respect to implementation of TCMs provided all of the following conditions are met:

- The local agency submits to the District an implementation plan which provides adequate resources to adopt and enforce the measures, and the District approves the plan;
- The local agency adopts and implements measures at least as stringent as those in the District plan; and
- The District adopts procedures to review the performance of the local agency in implementing the measures to ensure compliance with the District plan.

Through this section of the Health and Safety Code, the District can exempt facilities in jurisdictions that have adopted ordinances or other enforceable mechanisms from a rule or regulation.

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

At the federal level, the EPA is responsible for setting and enforcing national air quality standards for atmospheric pollutants. The EPA is charged with adopting rules and regulations to implement the federal Clean Air Act, including provisions for reducing emissions from transportation sources. EPA also reviews and approves the State Implementation Plan (SIP) formulated by the state air quality agency (ARB) which must demonstrate how regions within a state will achieve the National Ambient Air Quality Standards (NAAQS). EPA has the authority to implement plans in areas where state agencies have failed to submit an adequate State Implementation Plan (SIP). The EPA is anticipated to produce a draft Federal Implementation Plan (FIP) for the South Coast Air Basin in February of 1994 to address inadequacies in the current California SIP. Finally, the EPA establishes guidelines for acceptable TCMs, including enforceability and approval of TCMs in the SIP.

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

The U.S. DOT has significant implementation and coordination responsibilities with regard to improving air quality. Through the Intermodal Surface Transportation Efficiency Act (ISTEA), U.S. DOT acts as a major federal funding source for projects, including TCMs, which can help improve air quality. U.S. DOT also is responsible for coordinating with EPA, and assuring that transportation planning at the metropolitan scale is coordinated with air quality planning.

ISTEA provides two funding sources which can be used for air quality improvement projects. The Congestion Mitigation and Air Quality (CMAQ) program is directed toward implementing projects which assist in attaining national ambient air quality standards, primarily for ozone and carbon monoxide. The Surface Transportation Program (STP) is the major source of federal transportation funds for projects and programs which will help improve air quality.

18 Section 40717(e).

CALIFORNIA AIR RESOURCES BOARD (ARB)

At the state level, the ARB is responsible for implementing the California CAA, responding to the federal CAAA, and for regulating stationary and mobile sources. The ARB sets fuel specifications to reduce vehicular emissions, and establishes emission standards for vehicles sold in California. The ARB also reviews and approves air quality management plans (AQMPs) as required by the California CAA and pollutant specific attainment plans as required by the federal CAAA prior to submitting them to EPA for inclusion in the SIP. These plans are prepared by regional agencies such as the South Coast Air Quality Management District (SCAQMD). After ARB approves all measures, they are forwarded to EPA for inclusion in the SIP.

CALIFORNIA TRANSPORTATION COMMISSION (CTC)

The CTC is the administrative body responsible for providing policy direction for the state's transportation planning, programming and funding. The commission must approve the State Transportation Improvement Program (STIP). The STIP is a program of projects funded with Flexible Congestion Relief (FCR) and Commuter and Urban Rail Bond (CURB) funds. In addition, Caltrans projects are included in each STIP cycle. The STIP process requires each county to program its County TIP, based on a Fund Estimate provided by Caltrans and consistent with SCAG's Regional Mobility Plan goals and policies for the SCAG region. After adoption, each County TIP is submitted to SCAG for incorporation into the Regional TIP. SCAG approves the RTIP and submits it to the CTC for incorporation into the STIP.

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

Caltrans has major responsibilities for intermodal transportation planning, funding (both directly and as a pass through agency for U.S. DOT funds), and implementation. The agency is a major implementor of high occupancy vehicle improvements to the highway system and of other TCMs, such as non-recurrent congestion relief. Caltrans is responsible for programming Intercity Rail and the Interregional Road System programs. These programs are incorporated into the State TIP by the California Transportation Commission.

COUNTY TRANSPORTATION COMMISSIONS

CTCs have been formed under state law in Riverside (RCTC), San Bernardino (SANBAG), Orange (OCTA), Los Angeles (LACMTA), and Ventura (VCTC) Counties. These organizations have transportation planning and programming responsibilities. For example, they prepare and adopt a countywide Transportation Improvement Program (TIP) of projects for inclusion in the RTIP. Their responsibilities vary depending on whether countywide ballot measures for transportation funding have been approved. SCAG has delegated programming of CMAQ and STP funds under ISTEA to the CTCs, with the understanding that they follow regional policy criteria:

"Implementation of Transportation Control Measures required by the Air Quality Management Plan(s), including growth and demand management measures, shall be a high priority for expenditure of all Surface Transportation Program and Congestion Mitigation and Air Quality funds."

In recent years, the CTCs have assumed other responsibilities under state law. For example, they operate as the county Congestion Management Agencies (CMA) and as the Service Authority for Freeway Emergencies (SAFE). In both of these capacities, they have major planning, programming or implementation responsibilities for projects benefiting air quality.

COMMUTER TRANSPORTATION SERVICES (CTS)

CTS is an agency that can provide jurisdictions with transportation demand management (TDM) information and rideshare matching.

CITIES AND COUNTIES

Cities and counties in the SCAG region have a variety of responsibilities which impact air quality, both directly and indirectly. They are identified as having implementation responsibilities for TCMs in the AQMP. Both have local land use planning, zoning, subdivision review, building and occupancy permits, and other land use regulatory authorities. They also have business permitting authority, and provide transportation facilities and services. In addition, the counties have public health regulatory responsibilities. Some counties and cities are major employers and, as such, help improve air quality by policies and programs which facilitate ridesharing, promote transit use and encourage telecommuting and similar activities. With respect to air quality, local governments are responsible for mitigating emissions from land use decisions and implementing their respective roles in the AQMP.

SPECIAL DISTRICTS

In Southern California a variety of special districts directly or indirectly affect air quality. Examples of such jurisdictions include school districts, community college districts, sanitation districts, irrigation districts and water districts. These jurisdictions increasingly work closely with the air quality districts to help mitigate air quality emissions related to their operations.

D. ROLES OF SPECIAL COMMITTEES

TCM POLICY COMMITTEE

As part of the 1991 South Coast AQMP adoption process, a Transportation Control Measure Advisory Working Group to address implementation issues and revise the TCMs for the 1994 update of the AQMP. In mid-1993 the working group and subgroups were replaced with a joint SCAG/SCAQMD TCM Policy Committee and TCM Technical Advisory Group (TAG) to consider subregional input, recommend TCM refinements and assist in development of implementation strategies in the SCAB. The committee is composed of elected officials from each subregion, the four county transportation commissions, the SCAQMD and SCAG. The companion TAG also includes representatives from business, environmental interests, and Commuter Transportation Services to provide staff input to the Policy Committee. The Policy Committee will provide input to SCAG's Transportation and Communication Committee and the District's On-Road Transportation Committee.

During the monthly meetings of the Policy Committee and the bi-weekly meetings of the TCM TAG, discussions have ranged from what the region can realistically expect to achieve from the implementation of TCMs to how technology can be advanced to provide significantly lower-emitting vehicles. Recommendations to SCAG on TCM strategies to be included in the AQMP will be used in the AQMP to assess the level of emission reductions that would be required within the region overall to attain the ambient air quality standards.

With adoption of the Regional Mobility Element, draft TCMs will be conveyed to the SCAQMD for inclusion in the draft 1994 AQMP. Finalization of the TCMs is scheduled for summer 1994 when SCAG adopts the local government measures and TCMs to be included in the AQMP. It is anticipated that the breadth of strategies contained in the RME may be more comprehensive than the TCMs ultimately agreed upon for inclusion in the AQMP. The potential exists to require amendments to the RME.

Overall, the Committee structure is intended to provide the maximum degree of flexibility in identifying strategies and actions believed to be the most appropriate for implementation for mobility and air quality purposes. This approach is also intended to recognize common interests of neighboring communities in developing compatible options for TCM implementation, and to be sensitive to important differences in available infrastructure, transportation services, land uses and travel patterns in a diverse region.

MARKET INCENTIVES TASK FORCE

In early 1993, SCAG's Regional Council established a Market Incentives Task Force composed of elected officials to develop recommendations on possible market-based solutions to regional transportation and air quality problems as part of the RCP. Market-based controls rely on economic incentives and disincentives to regulate emissions, rather than on a specific control technology. The Task Force is evaluating the strengths and weaknesses of both and subsidies, and is considering the potential strategies for reinvesting proceeds from market incentives in transportation service enhancements.

Several transportation controls proposed for the 1994 AQMP contain market incentives components. IN addition, the recently released draft Federal Implementation Plan (FIP) for the South Coast incorporates a number of market-based measures such as: parking cash out; a permit/fee system for recreational boats and pleasurecraft; fees on emissions in excess of a target for commercial airports; takeoff fees for general aviation; and, an emission fee system to encourage lower emissions at the Los Angeles port.

ADVANCED TRANSPORTATION TECHNOLOGY (ATT) TASK FORCE

SCAG established the ATT Task Force which is composed of elected officials to address the primary question: how can advanced transportation technologies be used as a substitute or complement for traditional TCMs? The task force has structured an extensive program to obtain answers regarding the future of advanced transportation technologies to help meet the region's mobility, air quality and economic needs. The task force's work is closely coordinated with CALSTART, a consortium developing an electric vehicle industry in the Southland, and with Project California, a statewide group of business, industry and government leaders working on stimulating an advanced transportation technologies program in the state.

The ATT Task Force objectives are to:

- create a vision of 2010 ATT use;
- determine strategies and milestones;
- identify action items for follow-up consideration; and
- determine effectiveness of ATT in terms of enhancing mobility, improving air quality, reducing energy consumption, and improving economic development.

Strategies addressed by the task force include:

- electric vehicles;
- alternative fuels;
- intelligent vehicle highway systems (IVHS) such as smart cars and smart streets;
- smart shuttle transit; and
- telecommunications.

REGIONAL RAILROAD AIR QUALITY EMISSION REDUCTION BOARD

In addition to efforts to achieve emission reductions from vehicles, the SCAB has also included strategies to reduce emissions from trains. This is an advanced technology measure, as provided for by Section 182(e)(5) of the Clean Air Act. The Railroad Air Quality Emissions Reduction Program from the 1989/91 AQMP is being refined for the 1994 Ozone SIP submittal. This measure focuses on railroad operations including freight, commuter and intercity passenger trains. The intent is to reduce oxides of nitrogen from diesel-electric locomotives. Key concerns include: ensuring that adverse modal diversion from trains to trucks does not occur; the development of a comprehensive financing plan; and the provision of a backstop measure.

To establish control methods that achieve a substantially greater reduction in 2010 emissions, a Regional Railroad Air Quality Emission Reduction Program has been established, with a Policy Board and five Standing Committees including: Locomotive Propulsion Systems, Finance, Legal, Consolidation and Freight Movements. In addition, an Emissions Reduction Target Subcommittee will finalize the emissions reduction target for 2010 (currently set at 90%).

The previous Railroad Emissions Measure called for Railroad Electrification. The current form of the measure is technology-neutral, and calls for one or a combination of the following strategies to be used to lower locomotive emissions: clean diesel, SCR, cleaner fuels such as LNG used by gas engines or dual-fuel engines, electrification and/or new locomotive power plants such as fuel cells.

A series of studies will be completed by early 1996, permitting comparisons between alternative control methods, including feasibility and time to commercialization, life-cycle costs, and funding/financial plans required for implementation. The Policy Board will refine the Railroad Emissions Reduction Measure as appropriate, by June 1996.